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Breaking Down The Silos:

The Case of Houston Health Department Perinatal Hepatitis B Prevention Program

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Immunization Program

2018 TX PHBPP SUMMIT



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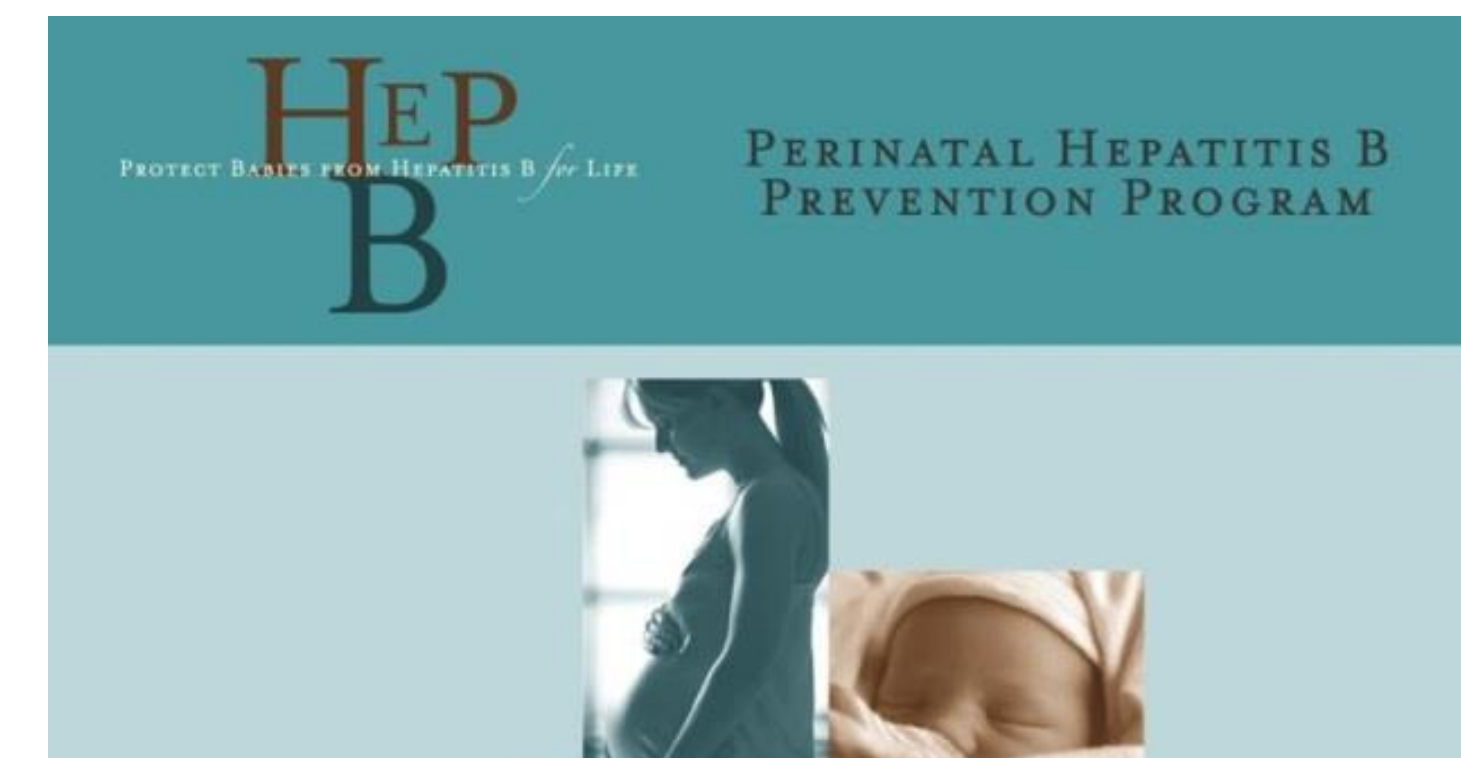
Learning Objectives



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Upon completion of this presentation, participants should be able to:

- ☐ Describe challenges to the identification of HBsAg-positive women and their infants
- ☐ Discuss strategies to overcome the identified challenges
- ☐ Discuss promising practices to increase identification of HBsAg-positive women and their infants



City of Houston (COH) Program Background



- ☐ Funded by CDC since 1991
 - ☐ City of Houston residents only
- ☐ Funded by TX DSHS since 2011-2012
 - ☐ Harris County residents only
- ☐ CDC Estimates:
 - ☐ 255 – 422 infants born to HBsAg-positive mothers in 2015
- ☐ **90% of the estimated births to HBsAg-positive pregnant mothers should be identified.**
- ☐ State of COH program

Jurisdiction	2013	2014	2015	2016	2017
COH	37	115	143	150	172
Harris County	19	88	88	126	97



"Yeah, I know what you're thinking:
'How did this happen?'"

IT'S
VERY
SIMPLE

A PERFORMANCE

I D A A P P L E B R O O G

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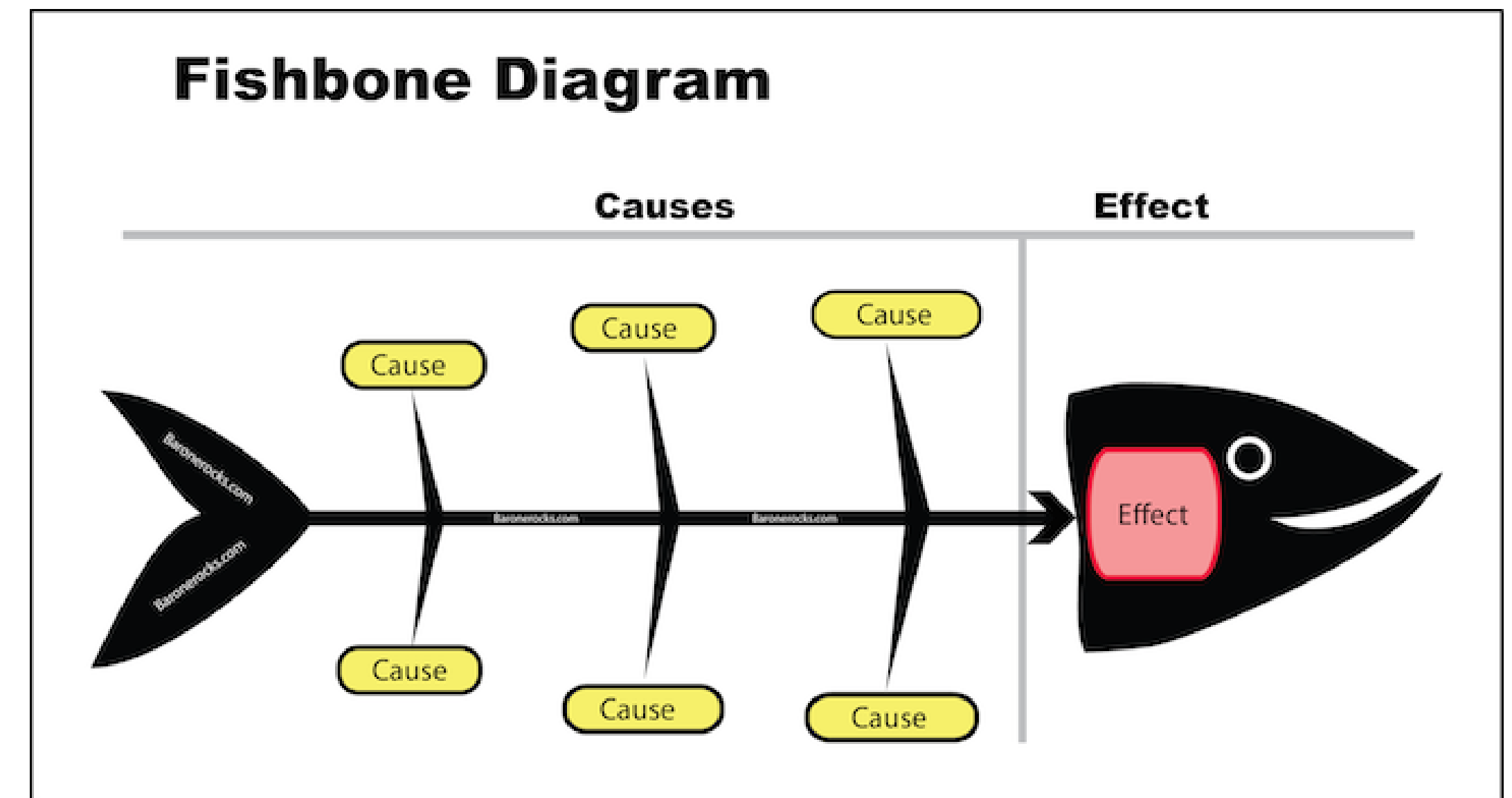
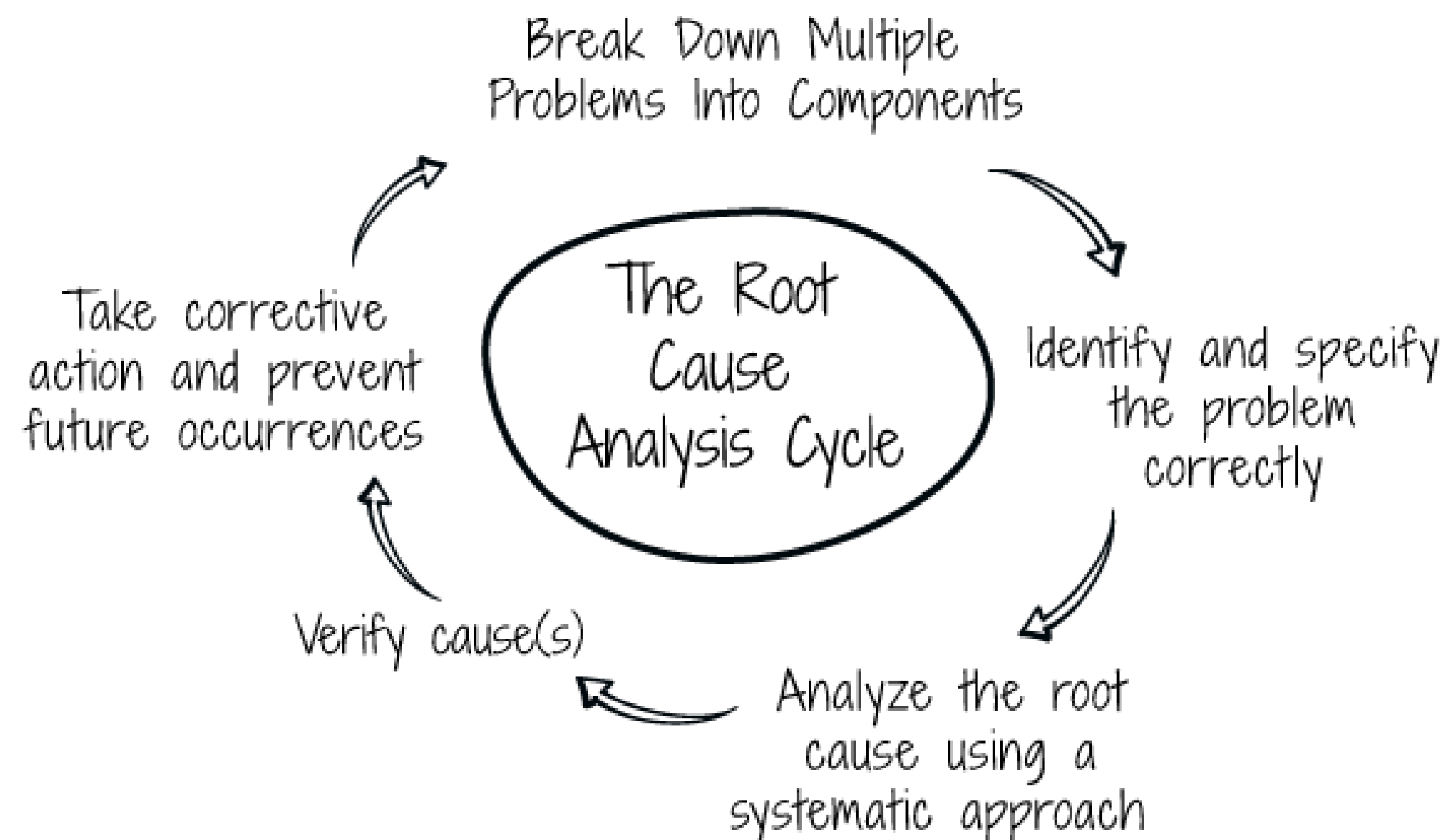
--- *to get* ---

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Identification of the Challenges: Process

- ❑ Problem: COH is not identifying number of infants estimated to be born to HBsAg-positive mothers
- ❑ Method: Root Cause Analysis (RCA)
- ❑ Tools: Five Whys Analysis & Fishbone Diagram



Assessment of the Challenges: Findings



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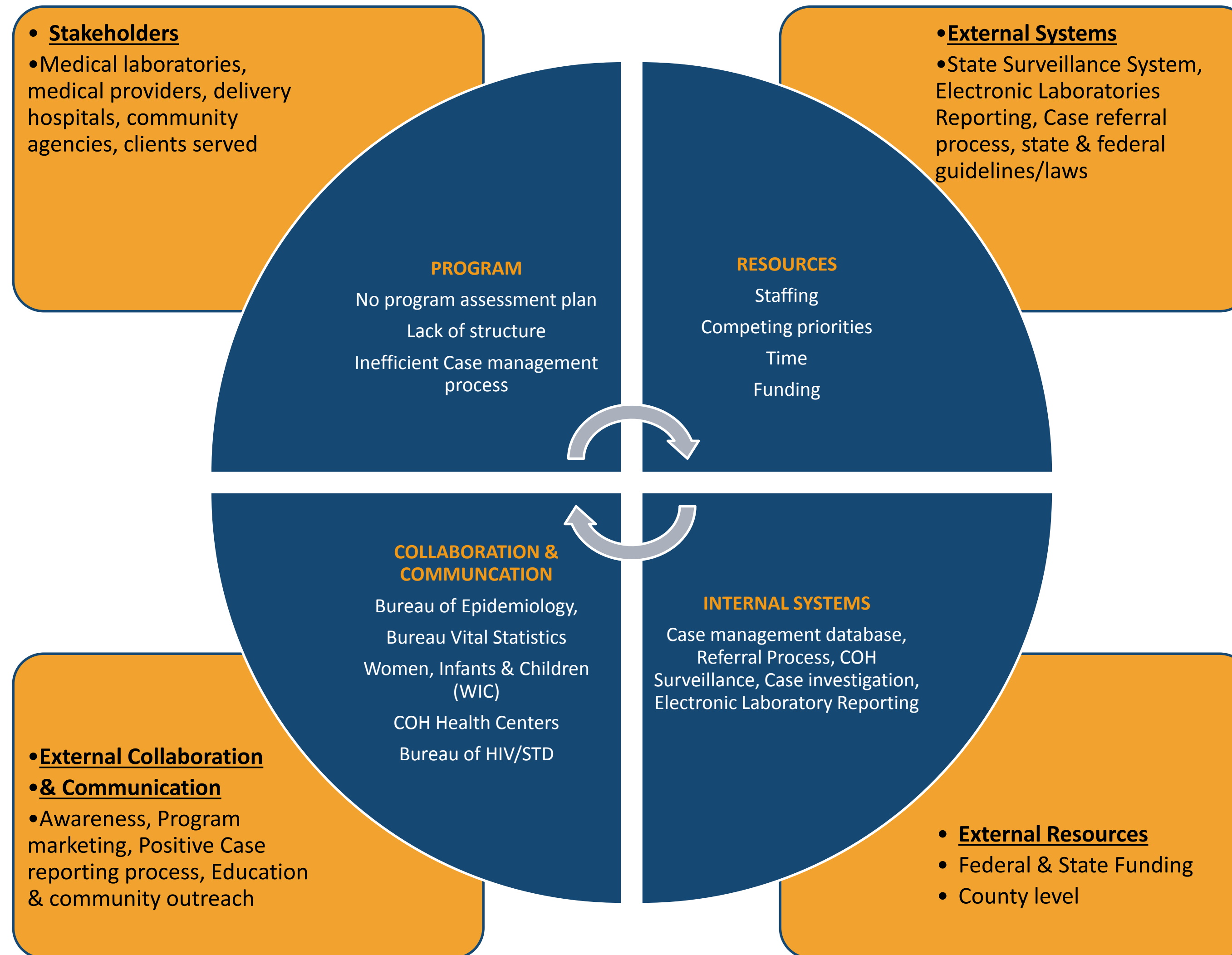


Figure 1. Challenges Identification Process & Findings

Overcoming The Challenges



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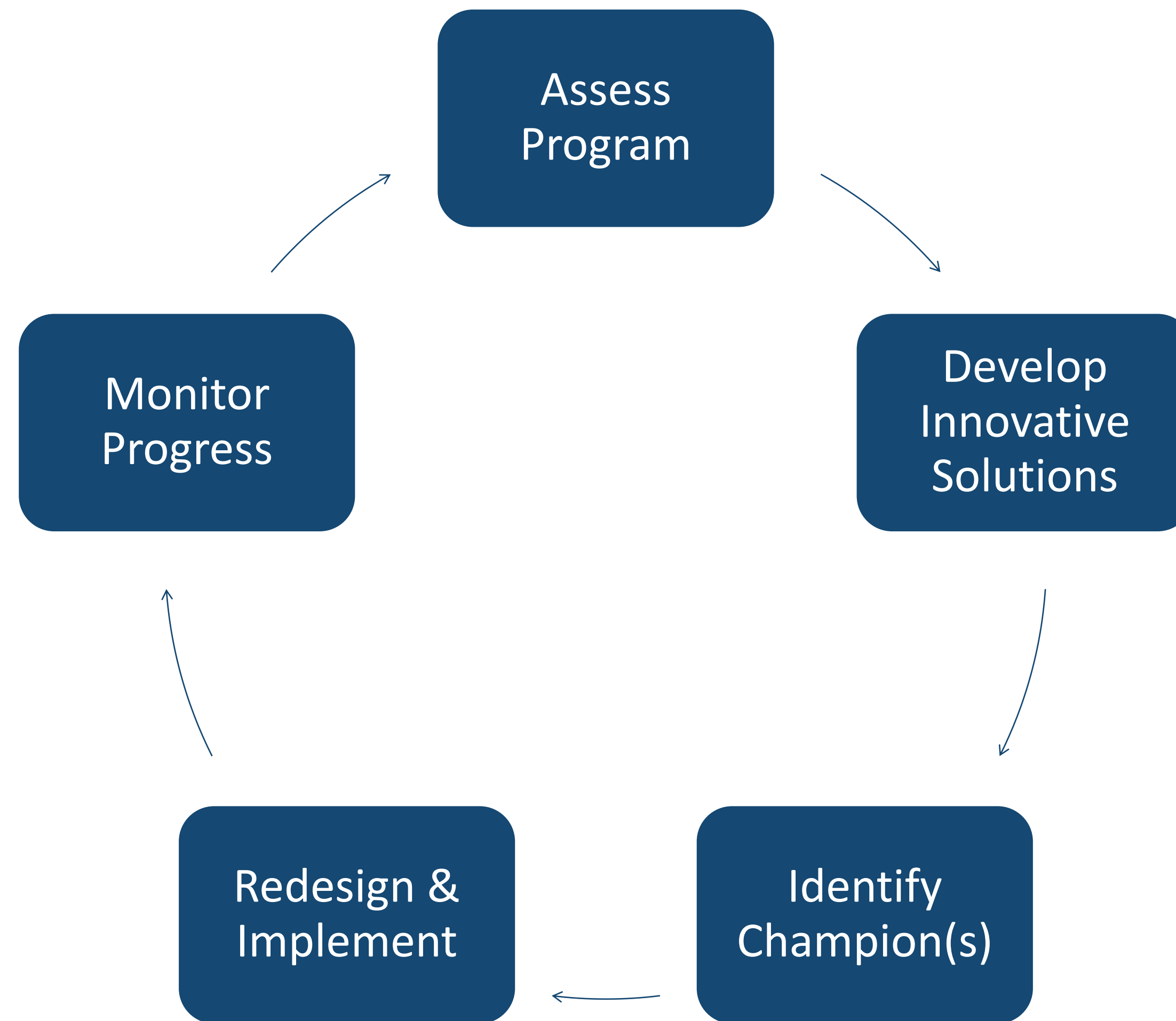
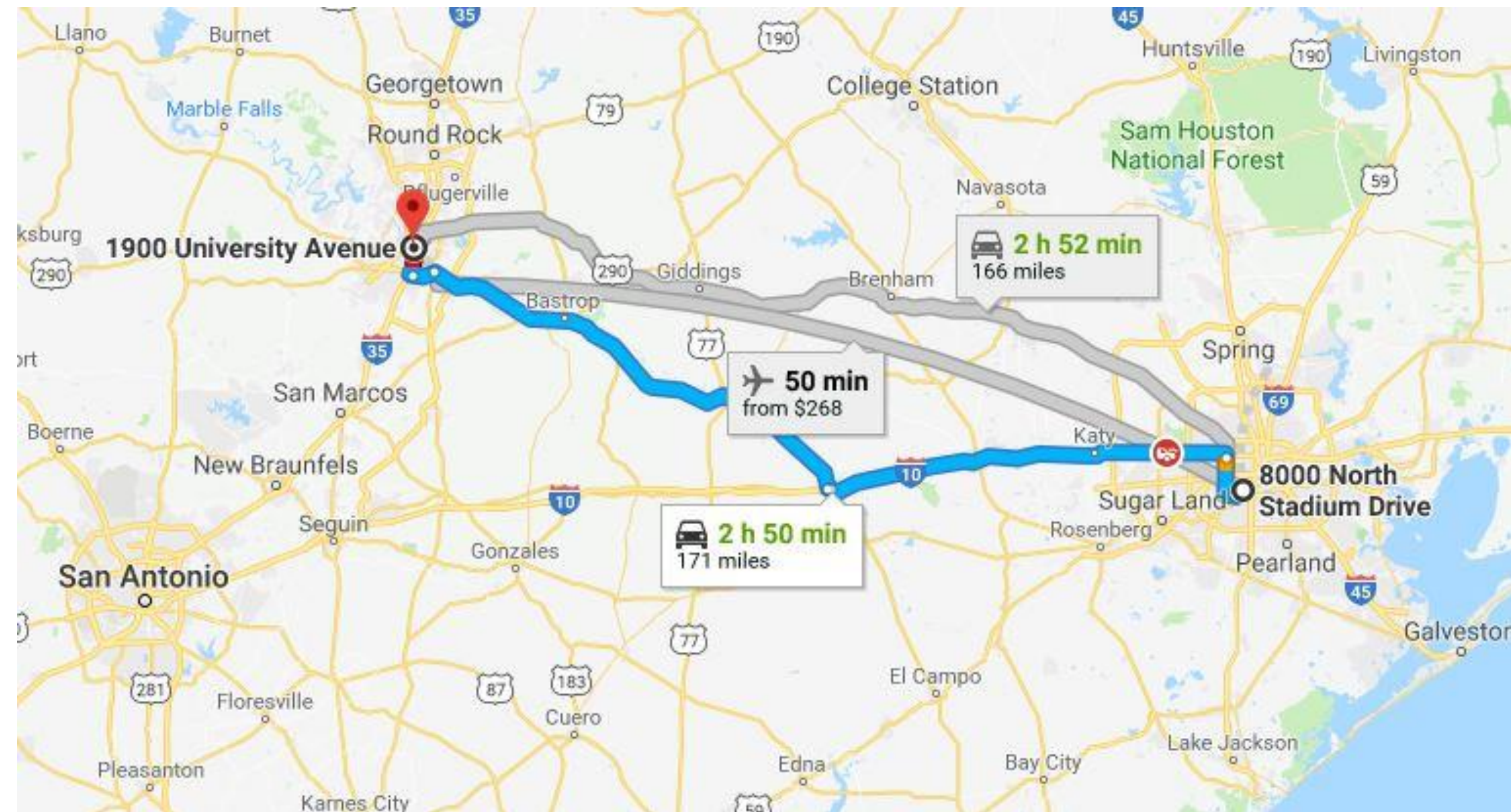


Figure 2.Strategies Identification Process

Step 1: Program Assessment

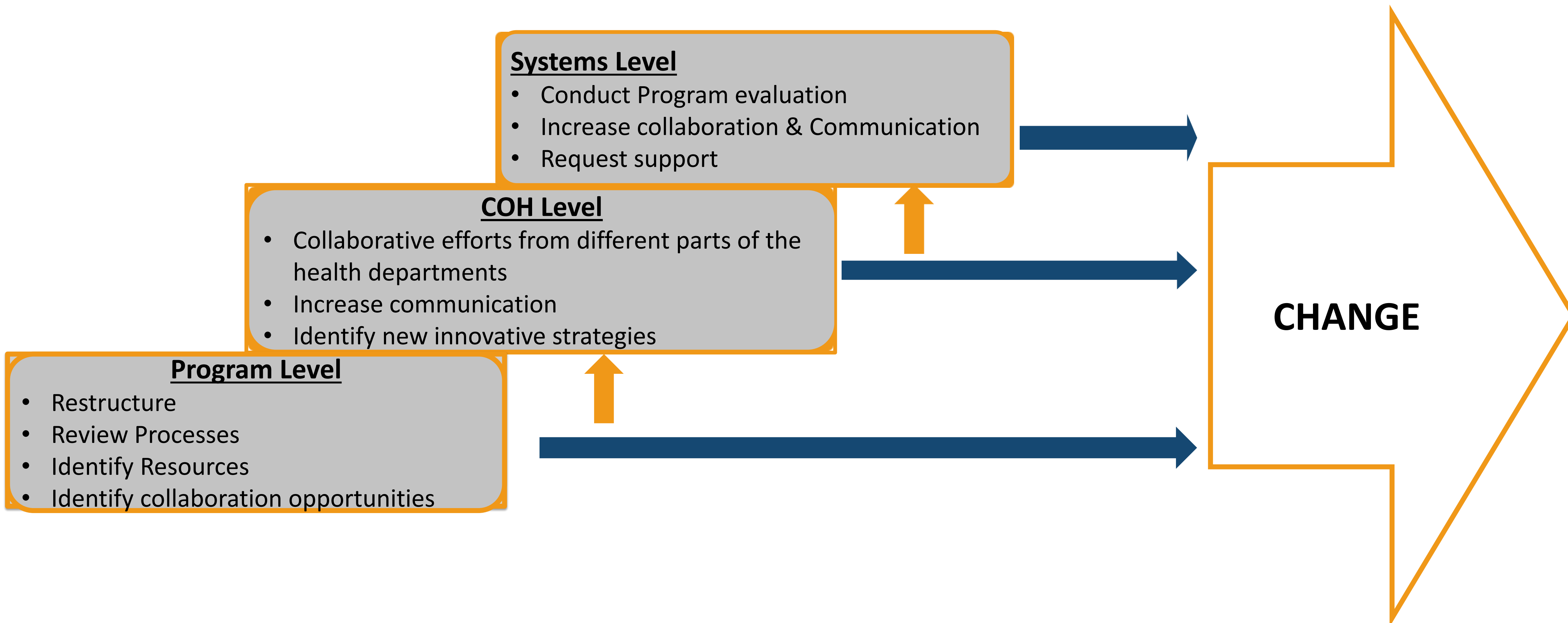
- ❑ Diagnostic tool:
 - ❑ Outcomes measurement
 - ❑ Areas of improvement
- ❑ Ongoing process
- ❑ Data-driven
- ❑ Very beneficial
- ❑ Roadmap
- ❑ Assist to develop program plan
 - ❑ It is a snapshot of program's plans & priorities for upcoming year(s)



Step 2: Solutions Development



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Step 3: Champion(s) Identification



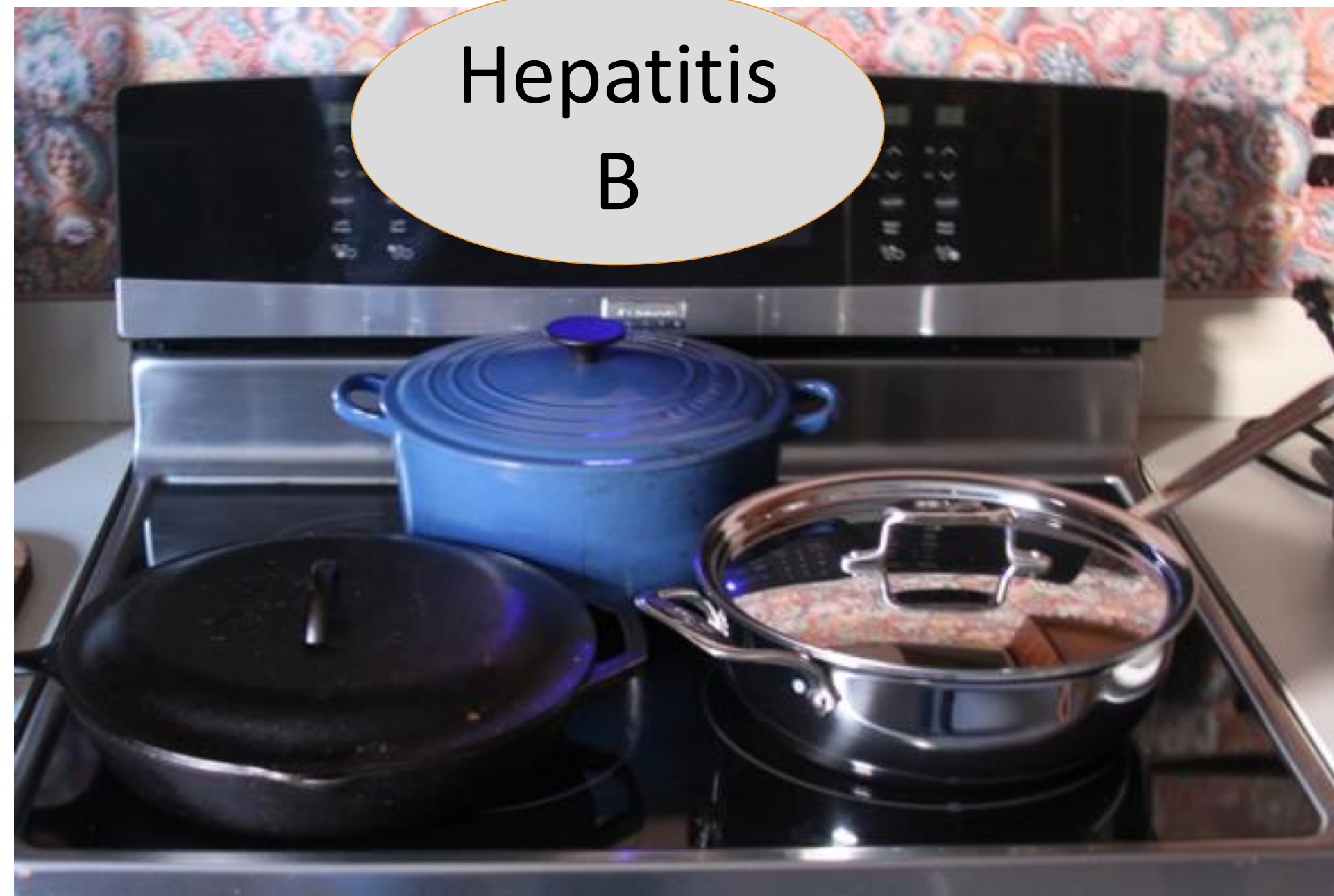
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„Change Leaders
don't create
followers, but more
Change Leaders“

Hepatitis
B



Hepatitis
B



Step 4: Redesign & Implementation



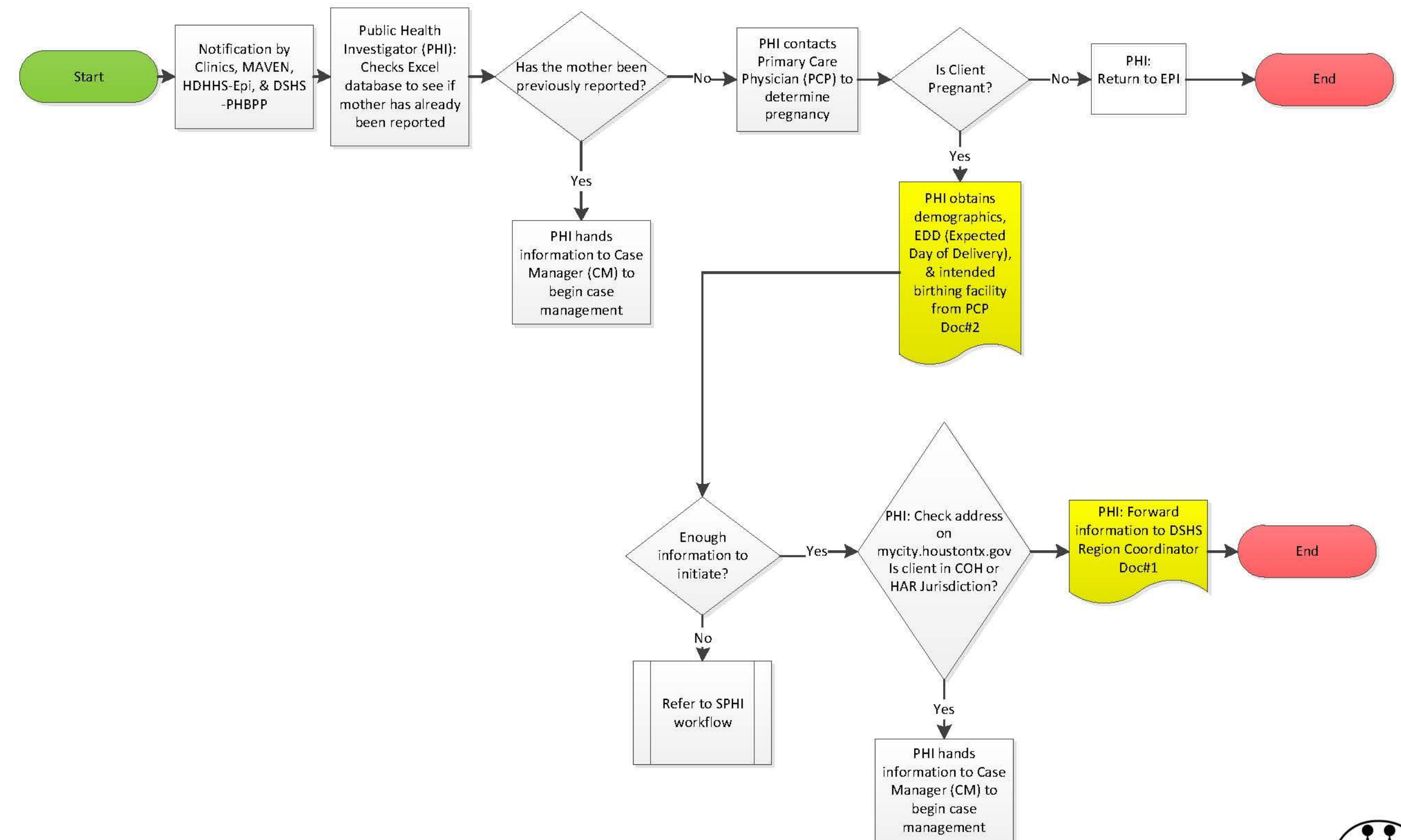
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**Projects
Showcase**

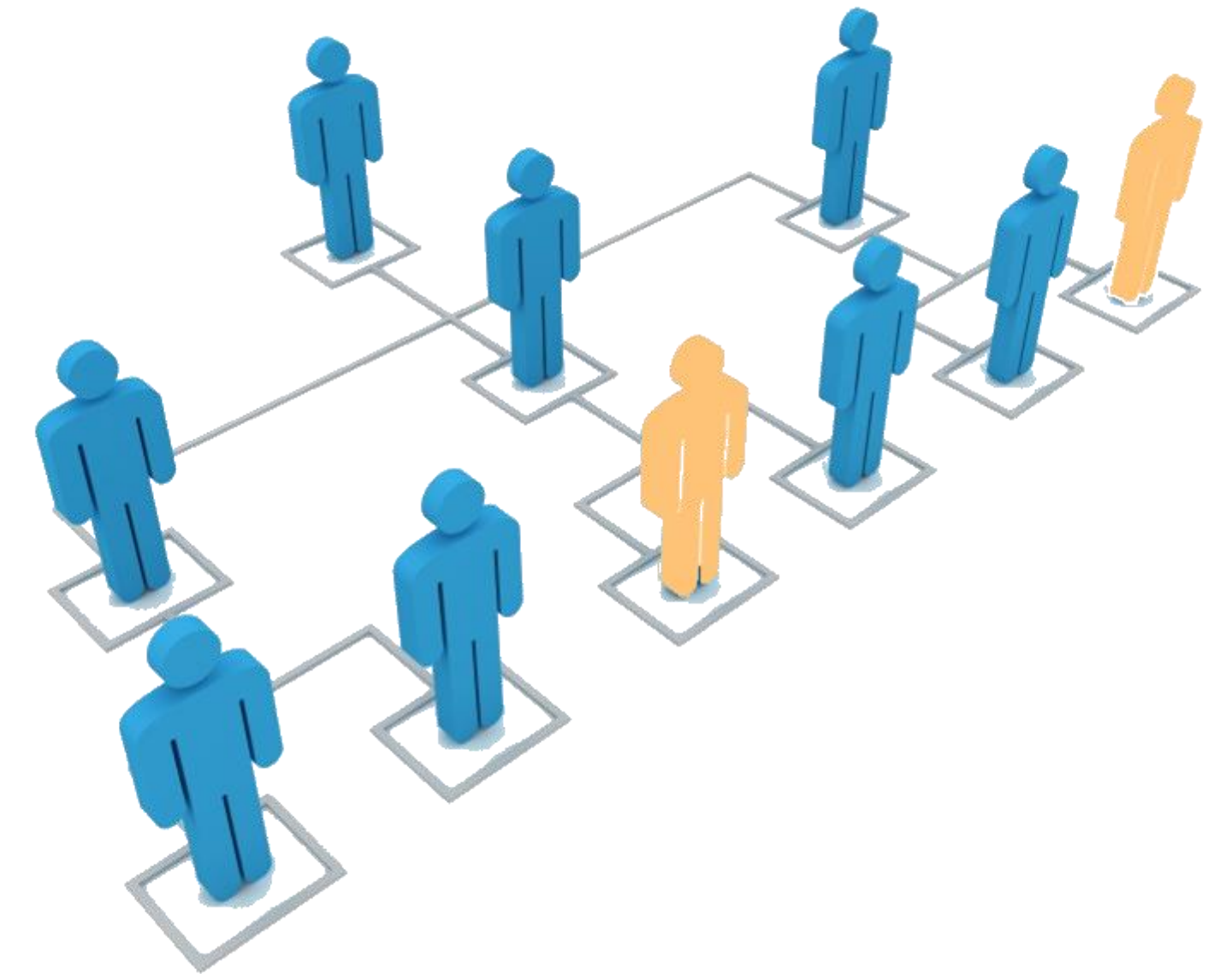
Change in Processes

- ❑ Real-time investigation
- ❑ Females with HBsAg, HBeAg, DNA investigated
- ❑ Standardized procedures
- ❑ Quality assurance of cases
- ❑ Workflow development

Perinatal Hepatitis B Prevention Program- Assign to Case Manager



Step 4: Redesign & Implementation



2014 Hepatitis B Case Mapping



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2014 Perinatal Hepatitis B Cases in City of Houston





- ☐ **Epidemiology:** Access to Surveillance System, MOU for acute cases investigation
- ☐ **Women, Infants and Children (WIC)** program: Identify lost to follow-up cases
- ☐ **COH Vital Statistics:** locate information on lost to follow-up cases
 - ☐ Referred to TX DSHS Vital Statistics
- ☐ **COH HIV/STD Bureau:** access to public data system
- ☐ **COH Health Centers:** Added program to access to Medicaid eligibility verification system
- ☐ **TX DSHS:** Access to state surveillance system

Epidemiology & PHBPP Project (1)

Overview Video



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Perinatal Hepatitis B Prevention Project



Epidemiology & PHBPP Project (2)

Workflows



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Perinatal Hep B

Cases Pending or Blank Status (Perinatal Hep B Program)	452 (0)	Very High	08/08/2017 03:06 PM i
Perinatal Hep B Program - All cases, open and closed	1995 (0)	Very High	08/08/2017 03:06 PM i
Perinatal Hep B Program - Infants and household contacts due for 2nd Hep B Dose (2 months)	41 (0)	Very High	08/08/2017 03:06 PM i
Perinatal Hep B Program - Infants and household contacts due for 3rd Hep B Dose (4 months)	80 (0)	Very High	08/08/2017 03:06 PM i
Perinatal Hep B Program - Infants and household contacts due for 4th Hep B Dose (6 months)	122 (0)	Very High	08/08/2017 03:06 PM i
Perinatal Hep B Program - Infants and household contacts due for PVST	612 (0)	Very High	08/08/2017 03:06 PM i
Perinatal Hep B Program - Infants and household contacts who need second vaccine series/PVST	6 (0)	Very High	08/08/2017 03:06 PM i
Hep B Subsequent Condition	0 (0)	Medium	08/08/2017 03:06 PM i



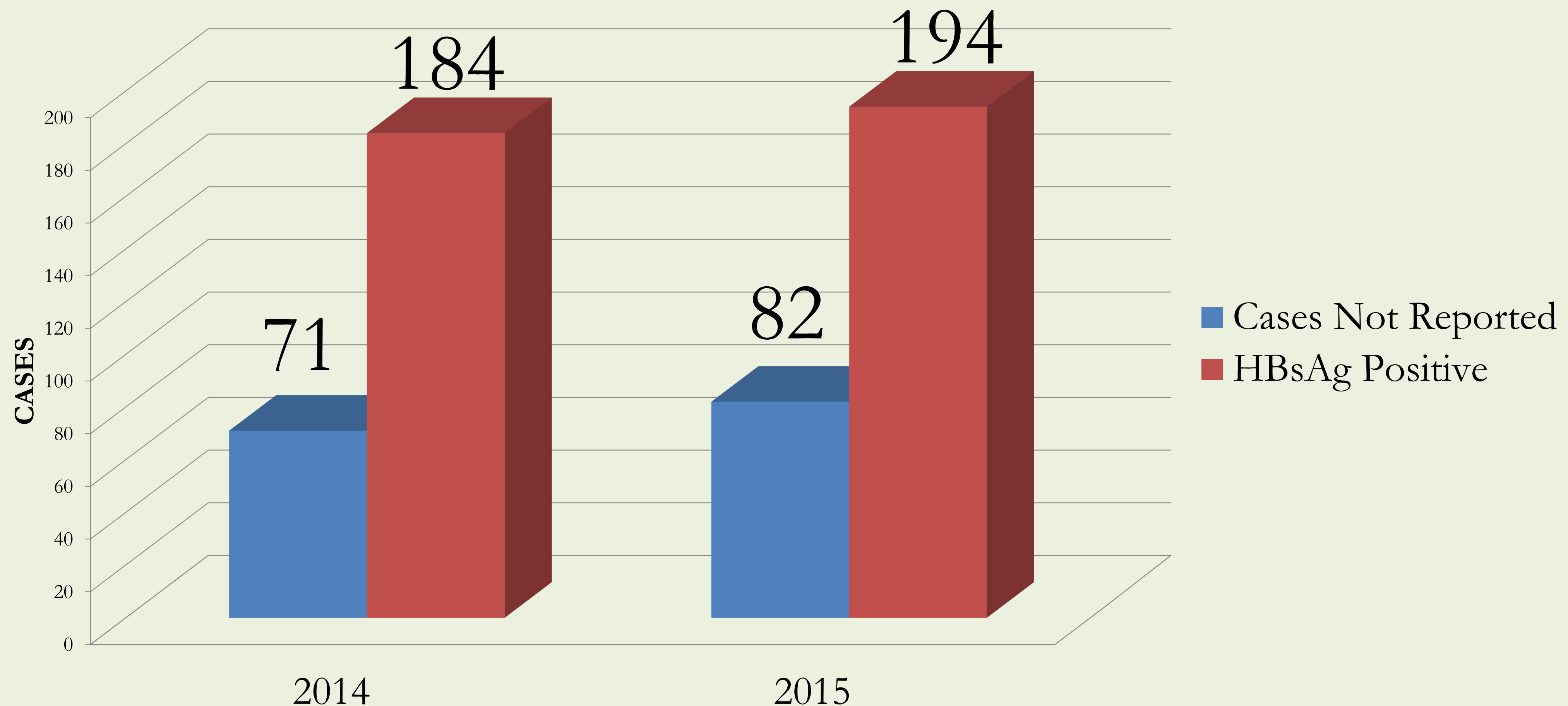
- ☐ New methodology designed to conduct hospital audits
- ☐ Bi-annual audit
- ☐ 24 delivery hospitals
- ☐ Reviewed of HBsAg-positive mothers & babies record
- ☐ Face-to-face discussion of findings
- ☐ Incentives

2016 Program Evaluation Results



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2014-2015 Infants Born to HBsAg Positive Mothers





Efforts to Increase Reporting of Hepatitis B Positive Mothers' Pregnancy Status

University of Texas School of Public Health

Summer 2017 Capstone

Leah Halley, Sahar Memon, Sanjana Puri, Yvana Rivera

2018 Program Evaluation

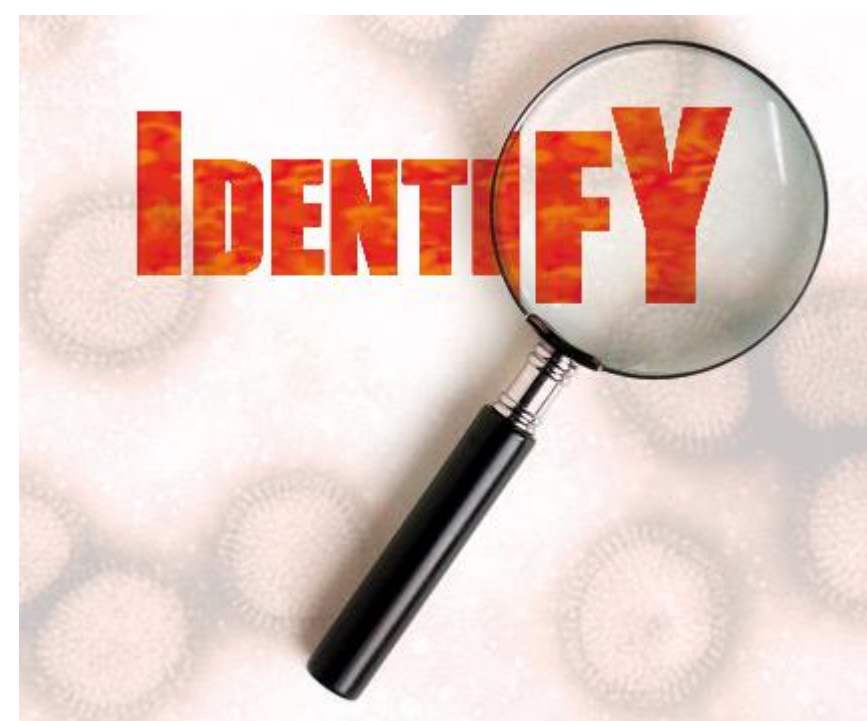


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- ❑ Great impact of previous audit

Jurisdiction	2013	2014	2015	2016	2017
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- ❑ Previous Methodology
- ❑ Request of HBIG pharmacy log 2016-2017



Step 5: Monitoring



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IF YOU WANT
TO GO FAST,
GO ALONE. IF
YOU WANT TO
GO FAR, GO
TOGETHER.

AFRICAN PROVERB



An effective policy framework can prevent new infections, ensure people can access clinical care, and in doing so reduce the burden of infection at an individual, city, county, state, country level.

Locamini, S., Hatzakis, A., Chen, D.S., & Lok, A. (2015). Strategies to control hepatitis B: Public policy, epidemiology, vaccine and drugs. *Journal of hepatology*, 62(1 Suppl):S76-86. doi: 10.1016/j.jhep.2015.01.018



"Viral hepatitis is simply not a sufficient priority in the United States. Despite being the seventh leading cause of death in the world and killing more people every year than HIV, road traffic accidents, or diabetes – viral hepatitis accounts for less than 1% of the National Institutes of Health research budget."

Brian Strom, MD, Rutgers University

Ault, A. (2017). National Academies: How to Eliminate Hep B, C in US by 2030.

<https://www.medscape.com/viewarticle/877862>

Next Step: Policy/Advocacy Approach (3)



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“viral hepatitis ranked as the seventh highest cause of mortality worldwide and responsible for **1.4 million deaths** per year (roughly **687, 000 deaths due to HBV** and 704, 000 due to HCV). However, despite being similar in scale to the **1.29 million deaths annually due to HIV**, **1.34 million annually due to tuberculosis**, and **850, 000 deaths annually due to malaria**, viral hepatitis has been a relatively neglected area”.

Nayagam, et al. (2016)

Nayagam, S., et al. (2016). Requirements for global elimination of hepatitis B: a modelling study. Available at [https://www.thelancet.com/journals/laninf/article/PIIS1473-3099\(16\)30204-3/fulltext](https://www.thelancet.com/journals/laninf/article/PIIS1473-3099(16)30204-3/fulltext)

Next Step: Policy/Advocacy Approach (4)

Remaining Key Issues:

- ☐ Need for early identification
- ☐ Need to enhance linkage-to care
- ☐ Need to increase access to treatment and preventive services
- ☐ Need to increase medical providers' knowledge
- ☐ Perinatal hepatitis B elimination remains stagnant
- ☐ Data



What Can You Do?



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- ☐ Gather evidence
- ☐ Advocate for change/revision:
 - ☐ HBV Clinical guidelines and recommendations:
 - ☐ Move from risk-based testing/screening to Universal HBV screening
 - ☐ Innovative systems to reach all individuals
 - ☐ State Laws on HBV screening and reporting
 - ☐ Preconception care for women
 - ☐ Resources:
 - ☐ Funding
 - ☐ Efficient viral hepatitis surveillance system



BE A CHANGE
LEADER

Summary



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- ☐ How often do you conduct assessment of your program?
- ☐ What does your data reveal?
 - ☐ Is it meaningful?
- ☐ Can you use the information collected to communicate program successes and needs?



Acknowledgments



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“Thank you”



Houston PHBPP Contacts



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Questions?



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